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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Applicant:

Sarah E. Kim et al.

Serial No.: 10/669,205

Filed: September 24, 2003

For: Integrated Re-Combiner for  
Electroosmotic Pumps Using  
Porous Frits

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Art Unit: 2812

Examiner: Stanetta D. Isaac

Atty Docket: ITL.1040US  
(P14807)

Assignee: Intel Corporation

Mail Stop **Appeal Brief-Patents**  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**REPLY BRIEF**

This reply brief is filed in response to the Examiner's Answer.

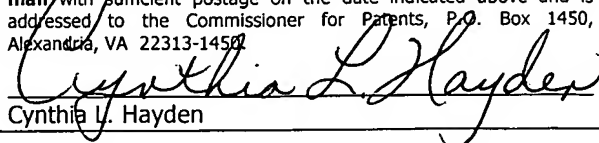
With respect to the point about the cited reference failing to teach a catalyst to remove gases from a circulating fluid, it is noted that the Examiner's Answer concedes that the reference teaches using a catalyst to grow nanotubes. Unexplained is why growing nanotubes would remove gas from a circulating fluid. The suggestion that catalysts increase the rate of reaction may or may not be so, but, even if it is so, it simply means that the rate of growth of nanotubes is accelerated through the action of the catalyst. The catalyst still does not remove gas from a circulating fluid.

For this first reason, reversal would be appropriate.

Secondly, it was argued that the grooves 122 shown, for example, in Figure 5, as not extending all the way across the substrate 102, still somehow do so. To the contrary, the reference is explicit that the grooves are sealed and, therefore, they cannot possibly extend

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Cynthia L. Hayden


completely across and communicate all the way through the wafer. For example, at column 9, lines 7-15, it is explained that the working fluid, such as air, "is naturally trapped in the grooves during the joining process 152" and further that "the desired working gas is trapped in the sealed grooves 122."

Thus, the suggestion that "Arik implies that the grooves would have to be formed across either wafer from side to side, since the fluid flows through the channels formed within the grooves", is simply wrong. There is no flowing fluid and there is no circulating fluid or liquid. Instead, the liquid is trapped and stuck within the grooves. It is inserted in the form of air or liquid that might be placed in the groove using a squeegee or spinning process. There is no circulation of the fluid and there is no ability of the fluid to escape from the grooves since the grooves do not extend to the edges of the substrate.

For this additional reason, the rejection should be reversed.

Respectfully submitted,

Date: February 7, 2008



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